MYSTERIES OF ETHIOPIAN MAMMALOGY

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Introduction

My colleagues Malcolm Largen, Dieter Kock, and myself have devoted much of the last 20 years to gathering what is known of the distribution and status of mammals in Ethiopia into a six-part catalogue (Largen *et al.* 1974; Yalden *et al.* 1976, 1977, 1980, 1984, 1986). Like all such works, it is a somewhat tedious compendium of sites, dates and authors, and hardly inspiring reading, no matter how useful it might prove to be. Furthermore, again like other such catalogues, it documents what is known, but either fails to mention what is not known, or only does so very obliquely. Yet what is not known is often more interesting, most especially in indicating future areas of profitable research. Following a recent lecture given, by invitation, at the second annual meeting of the Biological Society of Ethiopia, this present paper draws attention to some of the mysteries of Ethiopian mammalogy. It draws heavily on (1) the aforementioned *Catalogue of the Mammals of Ethiopia*, (2) on an update, part 7, which is currently in preparation, (3) on a recent review of the endemic mammals of Ethiopia (Yalden & Largen 1992), and (4) on a still unpublished history of mammalogy in Ethiopia which we wrote 8 years ago.

Species Problems and Problem Species

Tachyoryctes macrocephalus was originally described by Rüppell in 1842, on the basis of 4 specimens from "Shoa". The Giant Mole Rat was then not seen again until 1901 when Erlanger and Neumann collected a single specimen in Bale which was later described as the type of a new subspecies *T.m. hecki* Neumann & Rummler 1926. Again the species sank into oblivion until it was rediscovered in Bale in the 1960s. It has since been studied in that province, and its ecology there is reasonably well known. This leaves its original locality, presumably somewhere west of the Rift Valley, unknown. Rüppell did not himself journey further south than the Tississat Falls, so he presumably did not collect the specimens himself, and he certainly did not visit the modern province of Shoa. He did collect in Simien, but recent zoologists have studied that area thoroughly, and *T. macrocephalus* does not seem to occur there. In Bale, the species does not descend lower than 3,000 m so presumably high plateaux, above this altitude, should be searched. The three most likely areas are Mt Guna, near Debra Tabor, Mt Abuna Yosef, near Lalibela, or the high plateau of SW Welo, between Dessie and Mt Amba Farit; in the 1970s, we received reports that Giant Mole Rats occurred near Lalibela, but these remain unconfirmed.

Stenocephalemys griseicauda and *S. albocaudata*, two endemic narrow headed rats, are also species confined to high altitudes. *S. albocaudata* was the first to be described, from the Chilalo Mts in Arussi, in 1914. Much later, Petter realised, on the basis of further material from Dinshu, Bale, that there were two species, and he described *S. griseicauda* in 1972. Rather surprisingly, *S. griseicauda* seems to be much more widespread, as it is known from Simien, Gojjam and Shoa, as well as Arussi and Bale. In Bale, the two species overlap in altitudinal range and habitat, but *S. griseicauda* seems more common a lower altitudes, ranging from 2,400 to 4,000 m. *S. albocaudata* is confined above 3,000 m, and is more common than its relative above 3,500 m. Is it really absent from west of the Rift Valley or is its apparent absence there due, again, to insufficient collecting at high altitudes? Simien has been well studied, and it seems genuinely to be absent there. The high plateaux which need to be searched for *T. macrocephalus* should also be checked for *S. albocaudata*.

Dendromus lovati and *Muriculus imberbis* are two more endemic rodents, but much smaller than the previous examples. Nor do they live at such high altitudes, and that is perhaps their problem. They appear to be grassland specialists, living at 2,500–3,550 m and 1,900– 3,400 m respectively. Both occur on both sides of the Rift Valley, but both seem to be uncommon: *D. lovati* is known from only 11 sites and *M. imberbis* from only 9 sites. There is

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a suggestion that they are rarer than they were in the 1920s–1930s, for several recent collectors have failed to find one or other of them. If so, this could be the consequence of increased agricultural and grazing pressure on their grassland habitat. On the other hand, it may simply be that they always were scarce (older collections usually only contain one or two specimens). It is hardly surprising that we know virtually nothing about their biology, and we cannot even be certain that they are scarce—are we looking in the right places, at the right times, or using the right techniques? Perhaps it would be worth while collecting owl pellets in likely areas; owls are professional hunters of nocturnal rodents and frequently capture rarities when zoologists fail to catch them.

The two species of *Pelomys* present very different problems. *Pelomys harringtoni* is actually quite a common and widespread endemic rat, a bit like an *Arvicanthis* with a distinct yellowish tinge to its fur and a characteristic belly colour—three yellowish stripes down the centre and down each side with greyish white islands in between. The surprising thing is that we can't even be sure of its habitat. One line of evidence says that it occurs in scrub and bushy areas, resulting in a suggestion that it might climb in the bushes, whereas another suggestion is that it prefers wet swampy areas. These two views might actually be different aspects of the same ecology. If it occurs in wet swampy areas, where burrowing is not possible, perhaps it climbs into, even makes nests in, bushes? It seems possible that, because *Pelomys* looks so like an *Arvicanthis*, it has been overlooked. While we have every excuse for not knowing much about rare rodents, it ought to be possible to sort out the lifestyle of the common ones! The other species, *P. rex*, certainly couldn't be rarer; there is only one specimen, a skin, taken in the Charada Forest near Jimma in 1905. It seems to be about 30 per cent larger than *P. harringtoni*, and is reddish-agouti in colour dorsally with a clear white belly. It was originally called *Arvicanthis rex*, but forest is not the most likely habitat for an *Arvicanthis*. Clearly, we need some more specimens of *P. rex*, preferably ones with skulls, to settle its identity.

The woolly bat *Kerivoula eriophora* is a similar mystery. There is not even one specimen available now, and we have only Heuglin's description to go on. *Kerivoula* are not very common bats anywhere: they do not gather in big roosts, and frequent neither caves nor houses. They sometimes roost in abandoned weaver-bird nests, which is where Heuglin obtained his specimen, but few mammalogists think of checking these for bats. Only once has anyone else ever obtained a specimen of *Kerivoula* in Ethiopia. At present, *K. eriophora* is formally listed as an endemic to Ethiopia, but it is quite possible that it actually was a specimen of one of the other species known from elsewhere in Africa. None of these is very well known, either. Bats seen hanging under eaves, or in foliage, or disturbed from weaver nests, with long woolly fur and a cryptic colouration, are likely to be *Kerivoula*.

Genetta abyssinca is one of the most puzzling of all the Ethiopian mammals. It is often listed as a montane endemic, but both adjectives are doubtful. The species was well described and illustrated by Rüppell, and his type specimen is still available. It is a rather distinctive genet, with the spots over its shoulders joined into stripes (see Figure 1). The only

Figure 1 ***Genetta abyssinica*** **Drawn by Eric Robson**

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locality which Rüppell mentioned in connection with genets was Gondar, and *G. abyssinica* has been subsequently linked with Gondar. Perhaps it did, or does, occur there, but there are two other species of genet in Ethiopia, the Small-spotted Genet *G. felina* (synonym *G. genetta*) characteristic of drier country, and the Large-spotted Genet *G. maculata* (synonym *G. rubiginosa*) which prefers wetter areas. Both of these occur in the Gondar area. Perhaps, in fact, all three species are there, but the few definite records of *G. abyssinica* come from dry, lowland, areas - Zoula, Bulhar in N Somalia, Sennaar in Sudan among them. There are various other less certain localities for *G. abyssinica*. These are "less certain" in that either the genet might not be, in fact, *G. abyssinica* (specimens of *G. maculata* have sometimes been labelled *G. abyssinica* just because they came from "Abyssinia") or because they might not have been collected in the locality given on the specimen (several "trade skins" from Addis Ababa). Records of possible *G. abyssinica* have to be vetted for the possibility that the two other, more common, species are involved, but at present we have only 17 specimens from 8 localities in all the world's museums (at least 6 specimens were bought in Addis Ababa). Thus any new information on this elusive mammal will be valuable. Because genets are nocturnal, they are not seen very often, which makes it hard to accumulate information on them. Road casualties should be checked carefully, and the source of trade skins might also be profitably pursued.

Two of the larger endemic mammals, *Theropithecus gelada* and *Canis simensis*, are at least well known mammals ecologically and taxonomically. We know what habitats they use, and can even put rough estimates on their total world populations (about 600,000 Gelada and 700 Simien Fox). In both cases, however, there remain uncertainties over their distribution. Numerous authors have claimed that the Gelada occurs in Gojjam, but this claim seems to rely on a casual remark by Rüppell, who never visited Gojjam himself. There have also been claims that the Gelada occurs east of the Rift Valley, as far south as Sidamo. After compiling all the detailed records for the Catalogue of Mammals we were convinced that the Gelada has a very limited range, in northern Shoa, Welo, Begemdir and Tigre only. Then in 1990, came the remarkable news that there is a small population along the gorge of the Webi Shebelli in Arussi. If Gelada occur there, perhaps they occur in Gojjam as well. Such a large and conspicuous Gojjami must, however, be known to the farmers in the province if it really is there, so perhaps someone should ask them. Ignorance of the Simien Fox's true range is more understandable; it is much rarer, and although it is diurnal in Bale, seems to become nocturnal where it is persecuted. It was present in Gojjam earlier this century, but has not been reported from there since 1924. Is it really extinct there? And what about the other high plateaux areas in Welo and southern Begemdir? If Giant Mole Rats occur, there may be Simien Foxes eating them.

The dik-diks, *Madoqua*, pose a different sort of problem, one that might be solved by careful observation and photography. There are two groups of dik-dik in N E Africa, the longer-nosed larger *Madoqua guentheri* group and the shorter-nosed, smaller *M. saltiana* group (see Figure 2). Both occur

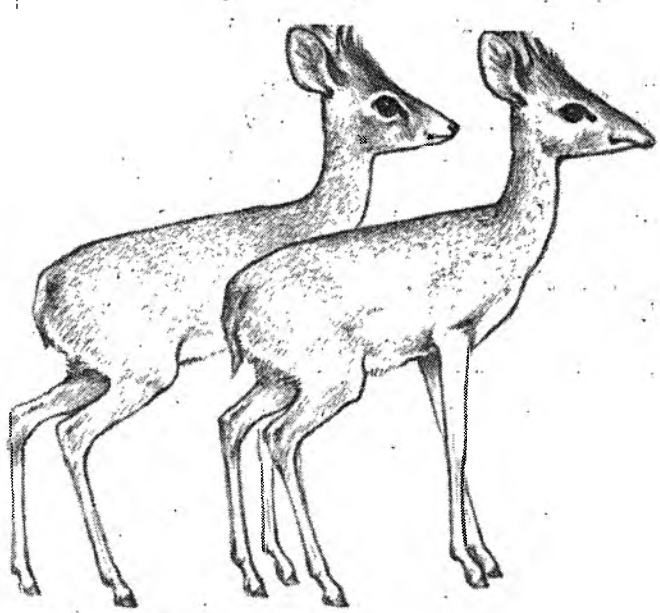

Figure 2 *Madoqua saltiana* to the left and *M. guentheri* to the right. Drawn by Eric Robson.

in Ethiopia, and their ranges overlap in the Ogaden, itself a cause of some confusion so far as sight records are concerned. *M. guentheri* ranges through the Ogaden and Borana country to as far westwards as the Omo National Park, but it is the *M. saltiana* group which poses the biggest problems. This species spreads much further north, through the Afar triangle and Eritrea to the Sudanese frontier, and its range extends round the eastern end of the Chercher Highlands into N Somalia and the Ogaden. The problems are caused by the colour variation which is shown through this range. From the neighbourhood of Harar south through the Ogaden as far as the Webi Shebelli, there is a very reddish-brown race, *M.s. hararensis* with foxy-red legs and shoulder flares. North of the Chercher Highlands

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(*M.s. saltiana*) and also south of the Webi Shebelli (*M.s. swaynei*) the dik-diks are rather uniform greyish-fawn agouti coloured, with pale rufous legs, while in N Somalia the dik-diks have a silvery-grey back contrasting with yellowish-orange flares (*M.s. phillipsi*) (Dorst & Dandelot's *Field Guide to the Larger Mammals of Africa* illustrates the extremes of colour variation quite well). The problems concern the nature of the boundaries between these colour forms, and what they might mean for the taxonomy of the species. Is the Webi Shebelli really a sharp boundary between two colour forms, as I have just suggested? What happens east of the Harar, where *M.s. hararensis* and *M.s. phillipsi* meet? Do they intergrade, or (as some museum specimens suggest) do the two forms both occur in the same limited area? If the latter is true, perhaps we actually have two species, a southern one *M. swaynei* (including *M.s. swaynei* and *M.s. hararensis*) and a northern one *M. saltiana* (including *M.s. saltiana* and *M.s. phillipsi*). In that case, I have to report that distinguishing a specimen of *M.s. swaynei* from one of *M.s. saltiana*, if you don't know where they come from, seems to me impossible, they look so similar. On top of this taxonomic problem, there is an ecological one. What is the ecological relationship between *M. guentheri* and *M. saltiana* in the areas of the Ogaden where both occur? Is one found in drier areas, further from rivers, or in different sorts of vegetation? And what is the significance of the colour-variation in *M. saltiana*? Are the reddish forms found in areas characterised by reddish soil, or is the colouration of special significance in display? In areas on the border of the colour-forms, do you find mixed pairs? Because dik-diks are diurnal, reasonably easy to observe and photograph from a vehicle, it would be possible to answer some of these questions by relatively straightforward but systematic road transect surveys in the correct areas.

Faunal Problems

Some of the questions to be asked of Ethiopian mammals concern not so much individual species as the overall composition of the fauna. From this viewpoint, the biggest question mark concerns the forest fauna. Most of the interesting areas for mammals in Ethiopia are either the high altitude moorlands (with such specialities as Gelada and Simien Fox, not to mention the rodents) or the low altitude national parks like Awash, Nechisar and Omo, with their large game. It is much harder to see or study forest mammals and fewer zoologists have tried to collect them. Given the rate at which forest has disappeared and is disappearing, it is important that the remaining patches are properly surveyed. A short, 3 week expedition to the Harenna Forest in Bale discovered two shrew species apparently new to science. What else might be waiting to be discovered in Ethiopia's forests? The southern forests of Sidamo are the only area where Ruspoli's Turaco occurs; are there any mammals similarly confined? What about the Charada Forest—does it still exist, and is *Pelomys rex* still there? The forests of Ethiopia seem to be rather poor in mammals. A comparison with the forest mammal fauna of Uganda suggests at least 50 species are apparently missing from Ethiopia, including many conspicuous animals like squirrels, monkeys, Bongo and Gorilla. There have, in fact, been numerous rumours that these last might occur in S W Ethiopia, though it gets harder and harder to credit this as time goes by without getting photographs or specimens. However, we must remember that there are still lots of surprises in Ethiopia. When we wrote our Catalogue part 6 in 1986, we cast doubt on the claims that Pangolins occur in the Gambela area. There are still no specimens of Pangolins from Ethiopia in any of the world's museums nor any photographs, but local evidence continues to affirm their presence. This seems to be a case where zoologists are much more ignorant than the local people! Perhaps the same is true of some of the high moorland areas which I mentioned earlier. As a ferenji, I am acutely aware of my inability to go and ask the locals what they know of their wildlife. Here is a worthwhile project for members of the EWNHS and the Biological Society of Ethiopia, particularly those like teachers who have extensive contacts with the local community. Of course, the information will need to be screened, sorted, sifted and perhaps dubious reports will need to be followed up by more critical examination of the evidence. However, most local informants will know such species as Porcupines and Pangolins, Lions and Leopards; asking them what they have, and just as important, what their grandfathers had that they have now lost, might encourage them to take more interest in their natural environment.

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